Remarks

Favorable reconsideration of this application is requested in view of the following remarks. For the reasons set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

The final Office Action dated July 7, 2004, indicated that claims 29-31, 33 and 34 are objected to but would be allowable if rewritten; claim 1 is rejected under 35 U.S.C. § 103(a) over *McCaslin* (U.S. Patent No. 5,668,794) in view of *Barron et al.* (U.S. Patent No. 5,357,567); claim 2 is rejected under 35 U.S.C. § 103(a) over *McCaslin* in view of *Barron* and further in view of *Chen et al.* (U.S. Patent No. 5,075,687); claim 4 is rejected under 35 U.S.C. § 103(a) over *McCaslin* in view of *Barron* and *Chen* and further in view of *Teitler et al.* (U.S. Patent No. 5,722,086); claims 7-8 are rejected under 35 U.S.C. § 103(a) over *McCaslin* in view of *Barron* and further in view of *Teitler*; claim 9 is rejected under 35 U.S.C. § 103(a) over *McCaslin* in view of *Barron* and *Teitler* and further in view of Intel (80C186EA/80C188EA Microprocessor User's Manual) (hereinafter the "Intel" reference); and claims 24, 26-28 and 35 are rejected under 35 U.S.C. § 103(a) over *McCaslin* in view of *Teitler*.

Applicant appreciates the indication of allowance for claims 29-31, 33 and 34. To remove these claims from the contested issues discussed below and a possible third appeal, claims 29, 33 and 34 have been amended to include limitations of the underlying claim. Therefore, Applicant submits that each of the claims (30 and 31 being dependent upon claim 29) is in condition for allowance, and Applicant requests that the objection be removed.

Applicant respectfully traverses of each of the Section 103(a) rejections because the rejections do not satisfy the *prima facie* requirements mandated under Section 103(a). Moreover, Applicant submits that the bases for the rejections are self-contradictory and untenable. The arguments presented in the previous Office Action Response filed on April 30, 2004, are also incorporated herein in view of the arguments presented below.

Applicant submits that the rejections presented in the Office Action are based upon contradictory interpretations of the '794 reference and improper. For example, the rationale presented in the rejections of claims 1 and 2 directly contradicts the rationale presented in the rejection of claims 24 and 35. The two rationales are based upon conflicting interpretations of the '794 reference and cannot exist in concert. Further, the rejections of

claims 1, 7 and 8 fail to allege correspondence to each of the claimed limitations. Each of the Section 103(a) rejections is improper and should be withdrawn.

Applicant respectfully traverses the rejection of claims 1, 7 and 8 because the Office Action fails to present a combination of references that corresponds to the claimed invention. Attempting to ignore the claim terms "hands-free registers," the Examiner cites two '794 IIR filters (420 and 428) as being the hands-free registers of claim 1; there is neither any correspondence nor any attempt to explain a relationship therebetween. (*See* page 4 of the instant Specification). Moreover, the Examiner's Office Action contradicts any possible correspondence by admitting that the '794 reference does not teach any physical apparatus (page 15, paragraph 28), and specifically, does not teach a portable handset (page 10, bottom). Thus, the Examiner has failed to provide any teaching that could correspond to the claimed hands-free registers. With respect to claims 7 and 8, the Office Action further fails to identify how the '794 reference directs the reading of the missing hands-free registers, as claimed. Without a presentation of correspondence to each of the claimed limitations, the Section 103(a) rejections are improper. Applicant accordingly requests that they be withdrawn.

The Examiner's contradicting interpretations of the '794 reference are untenable on many other grounds. For example, the Examiner admits in the rejections of claims 1 and 2 that the '794 reference fails to teach or correspond to the limitations directed to alternately receiving speech signals in the respective speech paths on page 3, paragraph 3, of the Office Action. The Examiner relies upon the teachings of the '567 reference to compensate for this '794 deficiency. But on page 10 at paragraph 13, in the rejection of claims 24 and 35, the Office Action asserts that the '794 echo suppressor corresponds to the claimed alternate receipt of speech signals. The rejection of claims 24 and 35 fails to include the '567 teachings; thus, if the rationale for the rejections of claims 1 and 2 are correct, the rejection of claims 24 and 35 cannot stand because the limitations directed to alternately receiving speech signals are taught by the '567 reference which is absent from the rationale for rejecting claims 24 and 35. The two rationales directly contradict and cannot stand together.

With further respect to the '794 reference's failure to teach limitations directed to alternately receiving speech signals, the Examiner's support, as asserted, is illogical. At page 15, paragraph 30, the Examiner asserts that speech signals are received for both a near

end and a far end for each sample taken; whereas, the Examiner also asserts that both signals are sampled at the same rate and the microprocessor must "necessarily alternate receiving the two signals." If both signals are received for each sample, then the asserted alternate receipt of the two signals would negate such simultaneous receipt as half of the sampled near end and far end signals would be ignored due to the alternate receipt by the microprocessor. Alternating receipt of the two signals would mean that only one of the signals (near end or far end) would be received at each sample time, as the two signals are alleged to be sampled together. These contradicting bases of rejection remove the otherwise ostensible *prima facie* bases for maintaining this Section 103(a) rejection. Applicant requests that the rejections be withdrawn.

Moreover, the rationale that the '794 reference would teach full-duplex communication is similarly flawed. At page 16, paragraph 31, the Examiner asserts that the '794 reference discloses full duplex operation since when both ends (near end and far end) are talking at the same time, the attenuation would be minimized to minimize the source of the signal. However, in view of the above-discussion, this minimization would not occur because the determination would only be based on half of the signals due to the alternate receipt. This minimization would be inaccurate as half of the signals necessary for such a determination would not be received. Thus, the '794 reference fails to correspond to the limitations directed to full duplex operation found, for example, in claims 2, 26, 27 and 32.

Another example of the Examiner's misinterpretation of the '794 reference is exhibited by the proposed modifications of the '794 reference which frustrate the operation of the '794 reference. At page 8, paragraph 11, the Examiner asserts that the '794 reference is silent as to the details of the peak detection algorithm; whereas the Examiner also admits that the '794 reference teaches repeated recalculation of attenuation based on a peak detection. The '794 reference uses these repeated calculations in the hardware so that the peak level is constantly being monitored and need not be estimated. *See* Col. 3, line 59-Col. 4, line 4. The proposed introduction of the '567 algorithm would introduce a microprocessor to replace the '794 peak value determination with an estimate which would also slow the calculation process. The Examiner then further slows the '794 process by introducing the interrupt operation of the '086 reference. Each of these modifications to or combinations with the '794 teachings further exacerbates the problem of slowing the peak

determination and replacing it with an estimate, thereby frustrating the operation of the '794 teachings. To propose such modifications is untenable and fails to comply with the requirements of a Section 103(a) rejection. *See* MPEP § 2143.01. As a *prima facie* Section 103(a) rejection has not been presented, Applicant requests that the rejections be withdrawn.

Further, Applicant traverses the Examiner's assertion that the '794 reference does not teach implementing the functional blocks of Figs. 19 and 20 with discrete components. The Examiner's response at page 17, paragraph 36, fails to account for the fact that the functional blocks of Fig. 19 are described using the discrete components of Fig. 1, which admittedly do not include a microprocessor (*see* Examiner's characterization of '794 Fig. 1 embodiment at page 4, paragraph 3, of the Office Action). It is well known in the electronic arts to implement such functional blocks with discrete components. For example, the top of page 8 of VHDL Made Easy! (enclosed) teaches a commonly-used approach for implementing functional blocks by discrete hardware (logic circuit) components. The treatise further teaches how IEEE Standard 1164 is used for such implementations. The Examiner's rationale in this regard fails. Applicant maintains the previous position that the '794 reference does not teach use of a microprocessor and does not provide any evidence that would motivate the skilled artisan to modify it to do so. Without a presentation of correspondence to each of the claimed limitations, the Section 103(a) rejection is improper and should be withdrawn.

To summarize, Applicant traverses each of the Section 103(a) rejections because the Examiner has failed to present a *prima facie* rejection that could be maintained. To facilitate prosecution of this application, Applicant would cordially invite the Examiner to call the undersigned if such communication would be valuable. Applicant accordingly requests that each of the rejections be withdrawn.

Please charge Deposit Account No. 50-0996 (LEGR.121US01) in the amount of $86.00 for the additional independent claim beyond those already paid for. If necessary, authority is given to charge/credit this same deposit account any additional fees/overages in support of this filing.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is encouraged to contact the undersigned at (651) 686-6633.

Respectfully submitted,

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